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Application No. 10/508,955
Amendment dated November 10, 2008
After Final Office Action of July 9, 2008

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Docket No.: 80653(4*762)

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently amended): A method for applying a hot melt adhesive in a melted state to a surface of a substrate ~~to obtain a laminated object~~, the method comprising the steps of:

preparing a hot melt adhesive, which is a urethane reactive hot melt adhesive and melts in a temperature range of 100 to 130°C, and a coating equipment including plural applicator roller stages which form an adhesive layer by laminating plural coatings of a hot melt adhesive;

conveying the substrate which is a wood board at a predetermined speed;

rotating applicator rollers of the applicator roller stages in the direction, to which the substrate is moved on a conveyor, to cover the substrate with the hot melt adhesive in a melted state, wherein

at least one[[an]] applicator roller has a surface made of a material which reduces slipping and is supplied from a pool of the hot melt adhesive existing in a valley formed by the applicator roller and a metering roller via an interface of the rollers, and the applicator roller is rotated in the direction which the substrate is moved on a conveyor and at a circumferential speed at least 20% slower or at least 20% faster than the predetermined speed of the substrate to cause the roller to slip, wherein the substrate is covered with the hot melt adhesive in a melted state supplied from a pool of the hot melt adhesive existing in a valley formed by the applicator roller and a metering roller via an interface of the rollers; and

contacting the upper surface of the substrate from above with the applicator roller rollers to form the [[an]] adhesive layer on substantially the entirety of the upper surface of the substrate with the hot melt adhesive; and

~~bonding said adhesive layer formed on the substrate with a laminate, which is selected from the group consisting of a film, a decorative paper, a laminate material and a metallic paper.~~

Claim 2 (Original): The method for applying a hot melt adhesive to a surface of a substrate according to claim 1, wherein the adhesive layer is formed by applying a plurality of coatings of the hot melt adhesive.

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Claim 3 (Original): The method for applying a hot melt adhesive to a surface of a substrate according to claim 1, wherein the circumferential speed of the applicator roller is set to be less than the predetermined speed at which the substrate is conveyed, with a speed reduction ratio ranging from 20% to 80% and equal to (conveying speed of substrate- circumferential speed of applicator roller) x 100 / conveying speed of substrate.

Claims 4-9 (Canceled).

Claim 10 (Currently amended) A method for producing a laminated object, the method comprising the steps of:

conveying a substrate which is a wood board at a predetermined speed;

contacting the upper surface of the substrate from above with ~~[[the]] plural applicator roller rollers of plural applicator roller stages which form an adhesive layer by laminating plural coatings of a hot melt adhesive;~~

rotating the applicator ~~roller rollers~~ covered with a hot melt adhesive in a melted state which is supplied from a pool of the hot melt adhesive located between the applicator ~~roller rollers~~ and ~~[[a]] metering roller rollers~~ via an interface of the applicator roller and ~~[[a]] metering roller rollers~~, wherein at least one applicator roller has a surface made of a material which reduces slipping, and is rotated at a circumferential speed at least 20% slower or at least 20% faster than the predetermined speed at which the substrate is conveyed to cause it to slip;

forming an adhesive layer on substantially the entirety of the upper surface of the substrate with the hot melt adhesive; and

applying a laminate, ~~which is selected from the group consisting of a film, a decorative paper, a laminate material and a metallic paper,~~ on the adhesive layer which is formed on the substrate.

Claim 11 (Original): The method of producing a laminated object according to claim 10, wherein the adhesive is applied by a plurality of applicator rollers.

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Claim 12 (Original): The method of producing a laminated object according to claim 10, wherein the substrate is a wood board, the adhesive is urethane reactive hot melt adhesive, and the laminate is a film or a decorative paper.

Claim 13-14 (Canceled).

Claim 15 (Previously presented): The method for applying the hot melt adhesive to the surface of the substrate according to claim 1, wherein a clearance between the applicator roller and a backing roller is 99% to 95% of the thickness of the substrate.

Claim 16 (Previously presented): The method for applying the hot melt adhesive to the surface of the substrate according to claim 1, wherein the urethane reactive hot melt adhesive which melts in a temperature range of 100 to 130°C has a viscosity of 1,000 to 30,000 mPa·s.

Claims 17-18 (Canceled).

Claim 19 (Previously Presented): The method for applying a hot melt adhesive to a surface of a substrate according to claim 1, wherein the laminated object is an architectural material.

Claim 20 (Previously Presented): The method of producing a laminated object according to claim 10, wherein the substrate on which the laminate is applied via the adhesive layer is an architectural material.

Claims 21 (Previously presented): The method for applying a hot melt adhesive to a surface of a substrate according to claim 1, wherein the substrate is substantially conveyed at a predetermined speed horizontally, while the substrate is conveyed and contacted with the applicator roller.

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Claims 22 (Previously presented): The method of producing a laminated object according to claim 10, wherein the substrate is substantially conveyed at a predetermined speed horizontally, while the substrate is conveyed and contacted with the applicator roller.

Claim 23 (New): The method for applying a hot melt adhesive to a surface of a substrate according to claim 1, further comprising a step of bonding the adhesive layer formed on the substrate with a laminate which is selected from the group consisting of a film, a decorative paper, a laminate material and a metallic paper.

Claim 24 (New): The method for producing a laminated object according to claim 10, wherein the laminate is selected from the group consisting of a film, a decorative paper, a laminate material and a metallic paper.

Claim 25 (New): The method for applying a hot melt adhesive to a surface of a substrate according to claim 1, wherein the applicator roller has a surface made of a rubber.

Claim 26 (New): The method for producing a laminated object according to claim 10, wherein the applicator roller has a surface made of a rubber.

Claim 27 (New): The method for applying a hot melt adhesive to a surface of a substrate according to claim 1, wherein the thickness of the adhesive layer is in the range from 20 to 80 μm , and the circumferential speed of the applicator roller is slower than the predetermined speed of the substrate such that the speed reduction ratio is in a range of 20 to 80%.

Claim 28 (New): The method for producing a laminated object according to claim 10, wherein the thickness of the adhesive layer is in the range from 20 to 80 μm , and the circumferential speed of the applicator roller is slower than the predetermined speed of the substrate such that the speed reduction ratio is in a range of 20 to 80%.

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